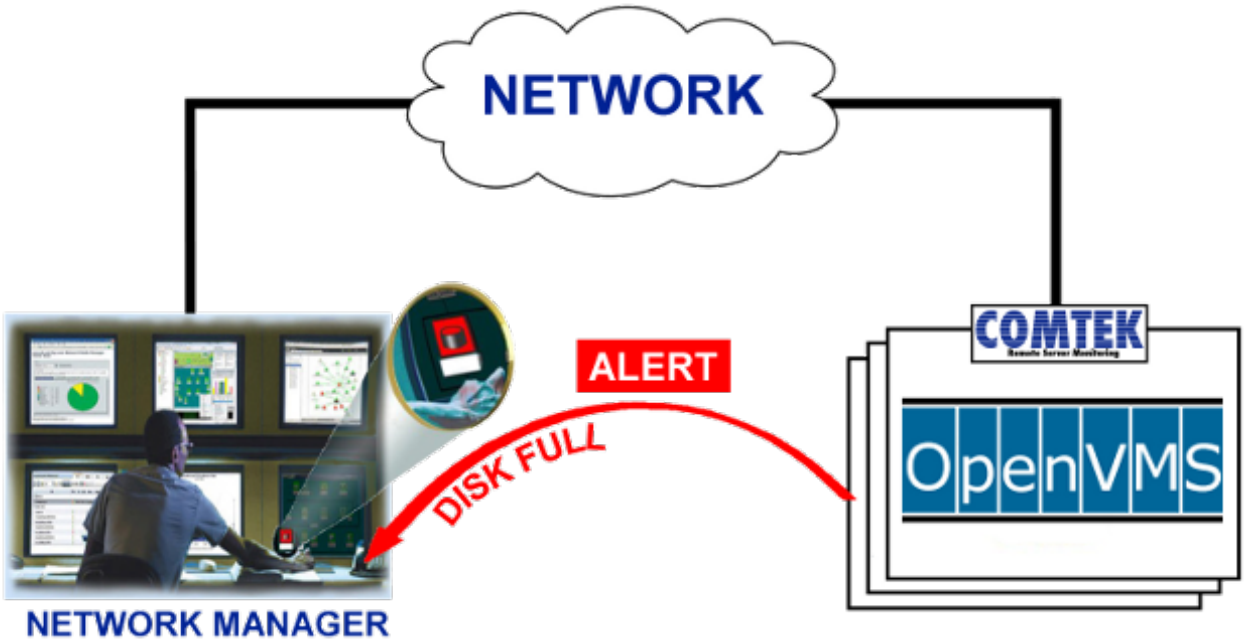
COMTEK /VMS

User Guide

COMTEK /OpenVMS v4.2



COMTEK
Remote Server Monitoring

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Forward

COMTEK NMServer for OpenVMS

HP OpenVMS computer systems often are used for Mission Critical Applications.

COMTEK NMServer for OpenVMS is designed to monitor those important OpenVMS Systems, and alert the Network Management system if an error is detected or threshold is crossed.

COMTEK /VMS monitors Applications, Hardware, and OpenVMS. COMTEK can be used on Itanium, VAX and Alpha systems - from Blades to Large Scale machines.

NMServer for OpenVMS provides monitoring and management information to any standard Network Manager such as HP OpenView, Tivoli, Sitescope, Solarwinds, and others.

COMTEK has the ability to monitor Mission Critical Processes, and alert the Network Manager instantly if one has failed. This allows time to remedy the issue before it develops into an even larger problem. Often a process can be fixed before users are impacted.

Another important capability is monitoring Application Logs. COMTEK can filter these logs, and send important messages to the Network Manager as alerts.

The data that is gathered and maintained by COMTEK /VMS is represented in a set of Management Information Base (MIB) specifications. The COMTEK MIB for OpenVMS contains information about system resources, CPU and disk utilization, process statistics, critical processes, disk, and queue statistics, as well as hardware errors. Thresholds can be set to determine the level at which an alert will be generated.

COMTEK /VMS was designed to be extremely powerful and at the same time have almost no impact on server performance. It has a very small operational footprint, is non-proprietary, and dependable. COMTEK is monitoring OpenVMS servers for many enterprises worldwide. COMTEK /VMS has been in use since 1996 (then called NMServer). COMTEK monitoring solutions have been available on other platforms since 1998.

Installing COMTEK /VMS is simple and safe. Complete installation instructions may be found in the COMTEK /VMS Installation Guide. COMTEK is compatible with HP TCP/IP Services, MultiNet, and TCPware.

The Download Package is complete. There are no additional components to purchase.

The Download contains the complete User Guide, Sample Configurations, Installation Aids, Sample Programs, Installation Guide, Readme, and other install tools.

This Forward is intended to provide a brief explanation of the features and functions of COMTEK NMServer for OpenVMS. The complete User Guide is included in the product Download. You are welcome to download COMTEK /VMS including the User Guide whenever desired.

Overview

NMServer for OpenVMS

NMServer for OpenVMS provides monitoring and management data for OpenVMS VAX, Alpha and Itanium systems to network managers, such as HP OpenView, HP Sitescope, Solarwinds, SNMPc, and others

NMServer for OpenVMS is implemented as an extensible SNMP agent. That is, NMServer for OpenVMS contains an optional single master agent application and multiple subagent applications that run on a single system. The default configuration of NMServer for OpenVMS utilizes a master agent supplied with the NMServer package that communicates with subagents using the Distributed Protocol Interface (DPI).

As an alternative to using the NMServer supplied DPI master agent, NMServer for OpenVMS may be configured to run as a set of eSNMP subagents, using the eSNMP master agent supplied with HP's TCP/IP Services (UCX). The NMServer eSNMP subagents may be run along with other HP or user supplied eSNMP subagents. Consult the current NMServer for OpenVMS product README.txt for information on eSNMP restrictions and prerequisite software.

NMServer for OpenVMS is designed to permit subagents to be added or removed as required in each operating environment. All subagents operate independently of one another and may be stopped and started without restarting the master agent.

The data that is gathered and maintained by NMServer for OpenVMS is represented in a set of Management Information Base (MIB) specifications. The MIBs supported by NMServer for OpenVMS contain information about system resource utilization, CPU utilization, disk utilization, process statistics, critical processes, disk, and queue statistics, as well as hardware errors.

NMServer for OpenVMS uses more than 40 different types of traps to instantly alert network managers of critical situations on the managed system. Traps are sent for the following conditions:

- disk, swap file, page file, CPU and interrupt usage exceed user specified thresholds
- certain status changes in disks, shadow sets, queues, queue entries, and process MWAIT states
- excessive disk operations per second
- CPU, memory, disk, and bus errors
- user specified mission critical process is not running
- opcom message
- user text message, with optional severity coding
- agent/subagent cold start, warm start, and process termination
- remote console command results

Trap messages, sent by NMServer for OpenVMS, are assigned sequence numbers and are retained in internal tables. If the network manager does not receive a trap message, a retransmission of the trap may be requested.

NMServer for OpenVMS consists of the following components:

- NM*Master – DPI master agent (optional)
- NM*SysMgr – system management subagent
- NM*TrpMgr – user trap manager subagent
- NM*Console – remote console subagent
- NM*Opcom – operator communications (opcom) subagent
- NM*VmsMon – VMS Monitor subagent

When NMServer for OpenVMS is purchased, the purchaser selects the subagents that are necessary to his environment. License keys issued by COMTEK Services are valid only for the subagents purchased. If the purchaser decides at a later time to add additional subagents, a new license key can be issued.

NM*Master Agent Description (DPI Only)

NM*Master performs all communications between the SNMP manager and the DPI NMServer subagents. The NM*Master agent converses with the SNMP manager in SNMP packets and uses DPI packets for communications with all subagents.

The NM*Master agent supports the system group of MIB-II, the DPI20 MIB, the Subagent MIB and the COMTEK NM*Master Agent MIB. Community strings and trap destinations identifying SNMP manager addresses and access privileges are also maintained within NM*Master.

When installing NMServer for OpenVMS on an Alpha system in certain configurations, the installer has the option to install NMServer to use either an TCP/IP vendor-supplied SNMP master agent or NMServer's own SNMP master agent. This selection merely identifies the extensible agent protocol and the master agent that is to be used between the subagents and the SNMP manager

If your environment permits you to use NMServer with the TCP vendor-supplied master agent, you will be able to you will be able to run any TCP vendor-supplied or HP supplied subagents (such as Insight Management Agents) along with NMServer. NMServer's SNMP master agent NM*Master uses the DPI extensible agent protocol. The MIB data that is instrumented by the NM*SysMgr, NM*TrpMgr, NM*Console, NM*Opcom and NM*VmsMon subagents is the same, regardless of the choice of DPI or eSNMP as the extensible agent protocol. All of the sub-agent MIBs have been combined into a single .mib file for user convenience. Consult the product Readme for information on which configuration is compatible with your environment.

By default, NM*Master uses UDP port 161, the standard SNMP port, to receive messages from SNMP managers. Any other agent on the system that accesses port 161 must be disabled. Alternatively, NM*Master may be directed to use a port other than 161, thereby allowing NMServer to coexist with another SNMP agent.

MN*SysMgr Subagent Description

The NM*SysMgr subagent monitors system management data. This subagent tracks system performance, system resource utilization, process statistics, queue information, operator communications (opcom) and error information. Traps are generated when system conditions exceed user-defined limits. NM*SysMgr supports the NM*SysMgr MIB and NM*SysMgr Trap MIB. NOTE: *All of the sub-agent MIBs have been combined into a single .mib file for user convenience.*

NM*TrpMgr Subagent Description

NM*TrpMgr provides a mechanism for sending user data as trap messages to the SNMP manager. User text messages can generate either generic or severity coded traps. NM*TrpMgr reads user text messages from an OpenVMS mailboxes and converts the text into a trap message. The trap message is then sent, via the DPI or eSNMP master agent, to the SNMP manager(s). NM*TrpMgr supports the NM*TrpMgr MIB and NM*TrpMgr Trap MIB. NOTE: *All of the sub-agent MIBs have been combined into a single .mib file for user convenience.*

NM*Opcom Subagent Description

NM*Opcom provides a mechanism for sending operator communication (opcom) messages as SNMP trap messages to SNMP managers. NM*Opcom receives opcom messages from the OpenVMS OPCOM process via an OpenVMS mailbox and converts the text into a trap message. The trap message is then sent, via the DPI or eSNMP master agent, to the SNMP manager(s). NM*Opcom supports the NM*Opcom MIB. NOTE: *All of the sub-agent MIBs have been combined into a single .mib file for user convenience.*

NM*VmsMon Subagent Description

NM*VmsMon provides SNMP accessibility to VMS MONITOR Utility data. NM*VmsMon collects system performance and utilization data on the following classes of MONITOR data: modes, file_system_cache, FCP, I/O, page, DECnet, lock, dlock, cluster, MSCP_server, states, system, rlock and timer. NM*VmsMon supports the NM*VmsMon MIB. NOTE: *All of the sub-agent MIBs have been combined into a single .mib file for user convenience.*

Product Installation

The following steps are required to install and configure NMServer for OpenVMS in a new operating environment. Consult the product README.txt file for the current prerequisites and installation procedures.

1. Download the **NMSERVERVMS.zip** file from COMTEK's web site.
2. Unzip the product on your PC. This will create a directory called **vms**.

Note: These 10 pages are meant to provide a brief overview

of the COMTEK /VMS product User Guide

The complete User Guide is included in the download package available on the COMTEK web site OpenVMS DOWNLOAD page. If you would like a copy of the complete User Guide, please fill out the OpenVMS Download Request and the product package will be downloaded to your system.

Thank you for your interest in COMTEK NMServer for OpenVMS.